REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

No claims are currently being cancelled.

No claims are currently being amended.

Claims 21 and 22 are currently being added.

This amendment and reply adds claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After adding the claims as set forth above, claims 1-3, 6-12 and 19-23 are now pending in this application for examination on the merits, in which claims 13-17 are withdrawn from consideration as being directed to a non-elected species.

Claim Rejections – Prior Art:

In the Office Action, claims 1-3, 6-12 and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,206,003 to Nose et al. ("Nose"); and claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nose in view of U.S. Patent No. 5,644,758 to Patrick et al. ("Patrick"). These rejections are traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

Independent claim 1 recites:

a work memory;

a graphic engine converting externally received image data into first bitmap data, and storing said first bitmap data into said work memory;

a display memory receiving and storing second bitmap data developed from said first bitmap data stored in said work memory; and

a driver circuit which receives said second bitmap data from said display memory, and drives a display panel in response to said second bitmap data received from said display memory,

wherein said first bitmap data includes a plurality of line data each including a plurality of pixel data associated with respective pixels associated with a corresponding gate line of said display panel, and

wherein said data transfer of said first bitmap data from said work memory to said display memory is performed such that each of said plurality of line data is transferred at the same time in parallel from said work memory to said display memory.

The Office Action asserts that the first display memory 7a of Nose corresponds to the claimed work memory. However, this assertion is incorrect, because the first display memory 7a of Nose is a display memory, and not a work memory. To assert that Nose's display memory 7a is a work memory is improper, since it does not operate as a work memory but rather as a display memory (and hence it is named as such).

The Office Action further asserts that the memory control circuit 6 of Nose corresponds to the claimed graphic engine. However, this assertion is incorrect, since Nose's memory control circuit 6 only performs memory control functions, and it does not operate as a graphic engine, which is a completely different type of element. Note that in Nose, the CPU 1 provides image data via line 8, and no image data is provided to the memory control circuit 6; rather, only a memory control signal is provided from the CPU 1 to the memory control circuit 6 of Nose. Accordingly, Nose does not disclose or suggest the claimed graphic engine.

Further, the Office Action asserts that the second selector 9 of Nose corresponds to the claimed display memory. Again, this assertion is incorrect, since the second selector 9 of Nose performs "selector" functions, and does not operate as a display memory. Rather, the first display memory 7a and the second display memory 7b of Nose operate as display memories (but they do not meet the specific features of the claimed display memory).

Still further, Figures 3, 4A and 4B of Nose show the operations of the second selector 9 and the third selector 10. When the scroll function is not used, as shown in Figure 3 of Nose, the second selector 9 selects the data stored in the first display memory 7a (that is, the upper 4 bits of the image data), and the third selector 10 selects the data stored in the second display memory 7b. This results in the normal operation for showing an 8-bit image.

When the scroll function is used, as shown in Figures 4A and 4B of Nose, the second selector 9 and the third selector 10 select the same display memory. This operation provides

for displaying 4-bit image in response to only the data stored in the first display memory (which includes upper 4 bits of the image data of the first frame) or data stored in the second display memory (which includes upper 4 bits of the image data of the second frame), thereby achieving a scroll function.

Such an operation does not require the second selector 9 to store data stored in the first display memory 7a or the second display memory 7b. Thus, the Office Action's assertion that the second selector 9 stores data is incorrect.

Since Nose does not disclose or suggest a work memory as claimed, it cannot disclose or suggest that each of a plurality of line data is transferred at the same time in parallel from the work memory to the display memory. Rather, in Nose's system, data is transferred directly from the CPU 1, via image data lines 8, to the first and second display memories 7a, 7b, without the use of a work memory.

Accordingly, presently pending independent claim 1 is not anticipated by Nose.

Still further, with respect to dependent claim 12, that claim recites:

a timing controller controlling said work memory, and said display memory, and said driver circuit,

wherein said driver circuit is connected to said second bit lines, and

wherein __said timing controller is adapted to deactivate said display memory__ to allow said first bitmap data to be transmitted from said work memory to said driver circuit through said second bit lines. (emphasis added).

In its rejection of claim 12, the Office Action refers in part to Figure 5 of Nose, but the dashed lines provided in the top row of that figure show that no data is provided from the display memories 7a, 7b to the drive circuit, and thus no data is allowed to be transmitted to the drive circuit of Nose in that case.

Accordingly, dependent claim 12 is patentable over the cited art of record for these additional reasons, beyond the reasons given above for its base claim 1.

Dependent claim 20 recites a transferring means and a displaying means, and it also recites that a first rate at which the first bitmap data is transferred from the work memory to

the display memory is faster than a second rate at which the second bitmap data is output from the display memory for display on the display panel. In its rejection of claim 20, the Office Action asserts that column 2, lines 1-10 of Patrick teaches the features recited in this claim. Applicants respectfully disagree.

Column 2, lines 1-10 of Patrick merely describes that the slower the rate of block transfers of data between memory locations, the slower the rate at which a computer system operates, and that block transfers of data between memory locations should be as fast as possible. This says nothing about having one block transfer rate between a first memory and a second memory and having a second block transfer rate (different from the first block transfer rate) between the second memory and another device (e.g., a display). **Rather, Patrick would appear to teach having a same, fast transfer rate between all of the devices in his display system, which is totally different from the specific "different speed" features recited in claim 20.**

Thus, dependent claim 20 patentably distinguishes over the cited art of record for these additional reasons, beyond the reasons given above for its base claim.

New Claims:

New claims 21 and 22 have been added to recite features described on pages 34 and 35 of the specification, in which such features provide a separate basis of patentability for those claims, beyond the reasons given above for their base claim 1.

Conclusion:

All of the issues raised in the Office Action have been addressed in this Amendment and Reply. Hence, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date ___3/9/2011___   By _____

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